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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/847,017	05/01/97	LEE	5649-275

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EXAMINER
CIRIC, L

ART UNIT	PAPER NUMBER
3743	2

DATE MAILED: 11/18/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/847,017

Applicant(s)

Lee

Examiner

Ljiljana V. Ciric *AVC*

Group Art Unit

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☒ Responsive to communication(s) filed on May 1, 1997

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-15 is/are pending in the application.

Of the above, claim(s) none is/are withdrawn from consideration.

☐ Claim(s) is/are allowed.

☒ Claim(s) 1-15 is/are rejected.

☐ Claim(s) is/are objected to.

☐ Claims are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on May 1, 1997 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some * ☐ None of the CERTIFIED copies of the priority documents have been received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the features canceled from the claims: the display device light guide [claims 1 through 4]; the light guide plate [claims 5 through 7]; the array of display elements on the light guide panel [claims 11 through 15]; and, the plurality of integrated circuits which are electrically connected to the array of display elements [claim 13]. No new matter should be entered.

3. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect can be deferred until the application is allowed by the examiner.

Specification

4. The abstract of the disclosure is objected to because it refers to the purported merits of the invention [i.e., "By rounding at least one corner,..."]. Correction is required. See MPEP § 608.01(b).

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5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: there is no antecedent basis for either a display device light guide [claims 1 through 4] or a light guide plate [claims 5 through 7]. The specification does refer to a display device and to a light guide panel 2 or 22.

Claim Rejections - 35 U.S.C. § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1 through 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 1 and claims 2 through 4 depending therefrom, it is not clear whether or not, as cited, the “display device light guide” refers to the light guide panel described in the specification and shown in the figures.

With regard to claim 3, the meaning of the limitations beginning with “remote” is not clear. For example, do these limitations relate the distance between the first corner and the second corner or between the second corner and the receiving means for the light source?

With regard to claim 5 and claims 6 and 7 depending therefrom, it is not clear whether or not, as cited, the “light guide plate” refers to the light guide panel described in the specification and shown in the figures.

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The term "sharp" in claims 4, 7, 10, and 15 is a relative term which renders the claims indefinite. The term "sharp" is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Therefore, as used to describe the types of angles *not* found in the configurations of the light guide and the groove respectively, this term renders these configurations indefinite because it does not clearly specify which range of angles is included and which range of angles is excluded.

Claim 8, in the preamble, cites the invention as being a backlight unit, but fails to recite a light source of any type in the body of the claim.

Also with regard to claim 8, for example, it is not clear whether the limitations beginning with "having at least one rounded corner" refer to the light guide projection or to the light guide panel as a whole. Claim 11 is similarly unclear.

Also with regard to claim 11, it is not clear what is meant by the limitation "opposite the mold frame". How are the array and the mold frame disposed relative to each other? Is the array facing, but not mounted on, the mold frame or are the array?

Claims 1 through 15 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are, for example: the ones between the light guide, the light source, and the mold frame [claim 1 and claims 2 through 4 depending therefrom]; the

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one between the light guide plate and the light guide panel [claim 5 and claims 6 and 7 depending therefrom]; the ones between the first corner of the mold frame groove and the first corner of the light guide panel [claim 9]; and, the ones between the second corner of the mold frame groove and the second corner of the light guide panel [claim 9].

The above is an indicative, but not necessarily an exhaustive, list of 35 U.S.C. 112, second paragraph, problems. Applicant is therefore advised to carefully review all of the claims for additional problems. Correction is required of all of the 35 U.S.C. 112, second paragraph problems, whether or not these were particularly pointed out above.

Claim Rejections - 35 U.S.C. § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

9. As best can be understood in view of the indefiniteness of the claims, claims 1, 2, 4, 5, 8, 9, 11, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by *Lee*.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

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Lee discloses the invention essentially as claimed, including a lampholder 115 or means for receiving a display device light source, a display device light guide/light guide plate or light-inducing plate 105, and a locking protrusion *a* or light guide projection/light guide fixing means having at least one rounded corner. Lamp cover 125 reads on a broad recitation of a mold frame including a groove *a'* having at least one rounded corner. LCD 100 reads on a broad recitation of an array of display elements on the light guide panel. The limitation "sharp angles" is broadly interpreted as including angles of less than ninety degrees.

The reference thus reads on the claims.

10. Alternately for claims 1, 2, 4, 8, and 9 and as best can be understood in view of the indefiniteness of the claims, claims 1 through 4, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by *Lan*.

Lan discloses the invention essentially as claimed, including seat body 9 or means for receiving display device light sources 13 and means for receiving a display device light guide 6A/6B, light guide fixing means or seat body 9 comprising a groove including at least one rounded corner and being free of sharp angles [Figure 3], a light guide panel 6A/6B mounted on the mold frame 9 with a light guide projection mounted in the groove and having at least one rounded corner corresponding to the at least one rounded corner of the mold frame groove, light sources 13 mounted on the mold frame 9 in spaced apart relation from the light guide panel 6A/6B, wherein the mold frame groove and the light guide panel 6A/6B both include a first

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angled corner and a second rounded corner. The limitation “sharp angles” is broadly interpreted as including angles of less than ninety degrees.

The reference thus reads on the claims.

11. Alternately for claims 1, 2, 4, 5, and 8 and as best can be understood in view of the indefiniteness of the claims, claims 1, 2, 4, 5, 7, 8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by *Parker et al.*

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Parker et al. discloses the invention essentially as claimed, including a mold frame or tray 35 with means for receiving a display device light source 3, with means for receiving a display device light guide or panel member 33, and with means for fixing the light guide 33 where the fixing means comprises a groove or recess 36 including at least one rounded corner and no “sharp” angles. *Parker et al.* also discloses a light guide plate or panel member 33 mounted on the mold frame or tray 35 with a light guide projection extending from the light guide plate 33 such that the projection has no “sharp” angles and includes at least one rounded corner [i.e., Figure 6] in the vicinity of light sources 3 corresponding to the at least one rounded corner of the mold frame groove or recess 36. The limitation “sharp angles” is broadly interpreted as including angles of less than ninety degrees.

The reference thus reads on the claims.

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12. Alternately for claim 5 and as best can be understood in view of the indefiniteness of the claims, claims 5 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by *Osawa et al.*

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Osawa et al. discloses the invention essentially as claimed, including a light guide plate 11 and a light guide projection extending therefrom and including at least one rounded corner and also including another, “angled” corner [Figure 8].

The reference thus reads on the claims.

13. Alternately for claim 5 and as best can be understood in view of the indefiniteness of the claims, claims 5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by *Guzik et al.*

Guzik et al. discloses the invention essentially as claimed, including a light guide plate 200 and two “half barrel shaped” extensions or light guide projections 264 and 260 [Figure 3]. The limitation “sharp angles” is broadly interpreted as including angles of less than ninety degrees.

The reference thus reads on the claims.

Claim Rejections - 35 U.S.C. § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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15. As best can be understood in view of the indefiniteness of the claims, claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Lee* in view of *Kitazawa et al.*

Lee discloses a flat panel display device essentially as claimed, except for not showing a diffuser between the light guide panel 105 and the array of display elements as read broadly on LCD 100. *Kitazawa et al.* also discloses a flat panel display device featuring a light guide plate 12 with an array of display elements or LCD 11 thereon facing the mold frame 20 and further teaches positioning a diffuser plate 13 between the light guide plate 12 and the display elements 11 in order to further diffuse the light emanating from light sources 15 and 16 throughout the entire light guide plate 12 [column 3, lines 5-26].

It would therefore have been obvious to one skilled in the art at the time of the invention to have a flat panel display device as disclosed by *Lee* but modified as taught by *Kitazawa et al.* to include a diffusion plate between the light guide plate and the array of display elements in order to achieve improved light dispersion throughout the light guide plate.

16. The non-application of art against claims 13 and 14 should not be construed as an indication that the claims contain allowable subject matter but rather that the claims could not be examined on the merits due to indefiniteness.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. *Obata* shows light guide panel 11 as including a light guide projection 37 having at least one rounded edge. *Fallon et al.* discloses a flat panel display device featuring a grooved

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frame. *Jönsson et al.* discloses a light guide including a plurality of arcuate light reflecting recesses formed in the peripheral edges thereof. *Tada* shows a surface lighting apparatus including a light guide with projections of interest. *Wall* features a round back-lit button pin of interest. *Yagi* discloses a liquid crystal display device with a C-shaped light guide fixing means. *Loucks* shows a display panel mount with rounded corners for a projection display system. *Hitachi Ltd.* features a positioning system for a liquid crystal display device.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Ciric, whose telephone number is (703) 308-3925. The examiner can normally be reached on normal business days from 8:30 a.m. to 5:00 p.m. EST/EDT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus, can be reached on (703) 308-1935. The new fax phone number for this Group is (703) 305-3463.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

lvc 

November 6, 1998


Ira S. Lazarus
Supervisory Patent Examiner
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